PATENT
[10020/6702]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	THOMPSON et al.
Continuation of Serial No.	:	**09/050,084**
Filed	:	Herewith
For	:	**A METHOD FOR CREATING A DISPLAY DEVICE** (As Amended)
Examiner	:	PIANALTO, Bernard
Art Unit	:	1762

Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to examination, please amend the above-identified continuation application as follows:

IN THE TITLE:

Please amend the title of the application as follows:

-- A METHOD FOR CREATING A DISPLAY DEVICE --.

IN THE SPECIFICATION:

Page 1, line 1, after the title, please insert the following paragraphs:

-- GOVERNMENT RIGHTS

This invention was made with Government support under Contract No. F33615-94-1-1414 awarded by DARPA. The government has certain rights in this invention.

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. Serial No. 09/050,084, filed March 30, 1998, which is a division of U.S. Serial No. 08/772,333, filed December 23, 1996, now U.S. Patent No. 6,013,982. --.

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IN THE CLAIMS:

Please cancel claims 1-30 without prejudice or disclaimer.

Please add the following new claims:

- - 31. (New). A method for creating a display device, comprising:

providing a transparent substrate;

depositing ink, by ink jet printing, over said substrate, wherein said ink comprises a luminescent material, resulting in a coated transparent substrate; and

depositing a light emitting layer over said coated transparent substrate; wherein said light emitting layer is capable of emitting light of a wavelength shorter than the wavelength of light emitted from said luminescent material upon activation thereof by light emitted from said light emitting layer.

32. (New). A method for creating a display device, comprising:

providing a transparent substrate;

depositing ink, by ink jet printing, over said substrate, wherein said ink comprises a luminescent material, resulting in a substrate having a coated surface and a non-coated surface; and

depositing a light emitting layer over the non-coated surface of said transparent substrate; wherein said light emitting layer is capable of emitting light of a wavelength shorter than the wavelength of light emitted from said luminescent material upon activation thereof by light emitted from said light emitting layer.

33. (New). The method of claim 31 or 32, wherein said substrate is transparent to ultraviolet radiation.

34. (New). The method of claim 31 or 32, wherein the depositing ink results in a partially coated surface.

35. (New). The method of claim 31 or 32, wherein the depositing ink results in a completely coated surface.

36. (New). The method of claim 31, wherein said substrate is transparent to visible radiation, and wherein said ink is deposited over said substrate in a pattern forming a plurality of light emitting regions, at least a portion of said light emitting regions comprising one or more luminescent materials selected from the group consisting of a red luminescent material, a green luminescent material and a blue luminescent material.

37. (New). The method of claim 36, said method further comprising:

depositing a transparent, first conductive layer over said light emitting regions;

depositing said light emitting layer over said conductive layer, wherein said light emitting layer is an organic blue light emitting device; and

depositing a second conductive layer over said light emitting layer.

38. (New). The method of claim 36 or 37, wherein said light emitting regions comprise red, green, and blue light emitting regions arranged in a predetermined configuration.

39. (New). The method of claim 38, wherein

said red, green and blue light emitting regions are arranged in pixels, each pixel comprising one red light emitting region, one green light emitting region and one blue light emitting region; and

an electrical contact is formed across said organic blue light emitting device in each of said red, green and blue light emitting regions.

40. (New). The method of claim 38, wherein

each of said red light emitting regions comprises a red luminescent material region and each of said green light emitting regions comprises a green luminescent material region; and

when an electrical contact is formed across said organic blue light emitting device said organic blue light emitting device directly emits blue light in each of the blue light emitting regions, and said organic blue light stimulates the luminescent material in each of the red and green light emitting regions.

41. (New). The method of claim 31 or 32, wherein said ink comprises one or more luminescent materials, a matrix material and a liquid carrier medium.

42. (New). The method of claim 41, wherein said ink comprises from about 2 to about 7 weight percent matrix material.

43. (New). The method of claim 41, wherein said dye is present in an amount ranging from about 0.1 to about 6 weight percent relative to said matrix material.

44. (New). The method of claim 41, wherein the matrix material is selected from the group consisting of polymethylmethacrylate, polyvinylcarbazole, polybutadiene, polyesters and N,N'-diphenyl-N,N'bis(3-methylphenyl)-1,1'-biphenyl-4,4'-diamine.

45. (New). The method of claim 31 or 32, wherein said transparent substrate is selected from the group consisting of glass and polyester.

46. (New). A method of using said display device created by the method of claim 37, comprising:

applying a potential across said first and second conductive layers, causing said light emitting layer to produce an emission of light radiation; and

exposing said ink comprising luminescent material to said light radiation, thereby stimulating emission of said dye.

47. (New). A method for creating a display device, comprising:

providing a transparent substrate;

depositing ink, by ink jet printing, over said substrate, wherein said ink comprises a luminescent material, resulting in a coated transparent substrate; and

depositing a light emitting layer over said coated transparent substrate; wherein said light emitting layer is capable of emitting light of a wavelength of about 530 to about 360 nanometers upon activation thereof by light emitted from said light emitting layer.

48. (New). A method for creating a display device, comprising:

providing a transparent substrate;

depositing ink, by ink jet printing, over said substrate, wherein said ink comprises a luminescent material, resulting in a substrate having a coated surface and a non-coated surface; and

depositing a light emitting layer over the non-coated surface of said transparent substrate; wherein said light emitting layer is capable of emitting light of a wavelength of about 530 to about 360 nanometers upon activation thereof by light emitted from said light emitting layer.

49. (New). The method of claim 47 or 48, wherein said substrate is transparent to ultraviolet radiation.

50. (New). The method of claim 47 or 48, wherein the depositing ink results in a partially coated surface.

51. (New). The method of claim 47 or 48, wherein the depositing ink results in a completely coated surface.

52. (New). The method of claim 47, wherein said substrate is transparent to visible radiation, and wherein said ink is deposited over said substrate in a pattern forming a plurality of light emitting regions, at least a portion of said light emitting regions comprising one or more luminescent materials selected from the group consisting of a red luminescent material, a green luminescent material and a blue luminescent material.

53. (New). The method of claim 52, said method further comprising:

depositing a transparent, first conductive layer over said light emitting regions;

depositing said light emitting layer over said conductive layer, wherein said light emitting layer is an organic blue light emitting device; and

depositing a second conductive layer over said light emitting layer.

54. (New). The method of claim 52 or 53, wherein said light emitting regions comprise red, green, and blue light emitting regions arranged in a predetermined configuration.

55. (New). The method of claim 54, wherein

said red, green and blue light emitting regions are arranged in pixels, each pixel comprising one red light emitting region, one green light emitting region and one blue light emitting region; and

an electrical contact is formed across said organic blue light emitting device in each of

said red, green and blue light emitting regions.

56. (New). The method of claim 54, wherein

each of said red light emitting regions comprises a red luminescent material region and each of said green light emitting regions comprises a green luminescent material region; and

when an electrical contact is formed across said organic blue light emitting device said organic blue light emitting device directly emits blue light in each of the blue light emitting regions, and said organic blue light stimulates the luminescent material in each of the red and green light emitting regions.

57. (New). The method of claim 47 or 48, wherein said ink comprises one or more luminescent materials, a matrix material and a liquid carrier medium.

58. (New). The method of claim 57, wherein said ink comprises from about 2 to about 7 weight percent matrix material.

59. (New). The method of claim 57, wherein said dye is present in an amount ranging from about 0.1 to about 6 weight percent relative to said matrix material.

60. (New). The method of claim 57, wherein the matrix material is selected from the group consisting of polymethylmethacrylate, polyvinylcarbazole, polybutadiene, polyesters and N,N'-diphenyl-N,N'bis(3-methylphenyl)-1,1'-biphenyl-4,4'-diamine.

61. (New). The method of claim 47 or 48, wherein said transparent substrate is selected from the group consisting of glass and polyester.

62. (New). A method of using said display device created by the method of claim 53, comprising:

applying a potential across said first and second conductive layers, causing said light emitting layer to produce an emission of light radiation; and

exposing said ink comprising luminescent material to said light radiation, thereby stimulating emission of said dye.

63. (New). A method for creating a display device, comprising:

providing a transparent substrate;

depositing ink, by ink jet printing, over said substrate, wherein said ink comprises a luminescent material, resulting in a coated transparent substrate; and

arranging a layer of organic, blue light emitting device over said coated transparent substrate, wherein said organic, blue light emitting device is capable of emitting ultraviolet or blue light radiation, and wherein said light emitting device is positioned so as to irradiate said coated transparent substrate when ultraviolet or blue light radiation is emitted therefrom.

64. (New). A method for creating a display device, comprising:

providing a transparent substrate;

depositing ink, by ink jet printing, over said substrate, wherein said ink comprises a luminescent material, resulting in a substrate having a coated surface and a non-coated surface; and

arranging a layer of organic, blue light emitting device over the non-coated surface of said transparent substrate, wherein said organic, blue light emitting device is capable of emitting ultraviolet or blue light radiation, and wherein said light emitting device is positioned so as to irradiate said coated transparent substrate when ultraviolet or blue light radiation is emitted therefrom. --.

REMARKS

Claims 1-30 of the above-identified parent case have been canceled. New claims 31-64 are submitted herewith for examination in the above-referenced continuation application. It is believed that no new matter has been added.

It is respectfully submitted that the present invention is new, non-obvious and useful. Prompt consideration and allowance of these claims is therefore respectfully requested.

Respectfully submitted,

KENYON & KENYON

Dated: 3/7/01

By: _____

Thomas F. Meagher
Reg. No. 29,831

One Broadway
New York, NY 10004
Telephone: (212) 425-7200
Facsimile: (212) 425-5288